

MATERIAL SAFETY DATA SHEET**888-2504 COLORTREND®PERMA CAL YELLOW****AX**

degussa.

Material no.

Specification

139280

Order Number

Version

Revision date

Print Date

Page

1.10 / US**08/17/2005****8/19/2005****1 / 12****1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product information**

Trade name : 888-2504 COLORTREND®PERMA CAL YELLOW AX
Use of the Substance / : Aqueous colorant
Preparation
Company : Degussa Corporation
379 Interpace Parkway
Parsippany, NJ 07054
USA

Telephone : 973-541-8000

Telefax : 973-541-8040

US: CHEMTREC EMERGENCY NUMBER : 800-424-9300

CANADA: CANUTEC EMERGENCY NUMBER : 613-996-6666

Product Regulatory Services : 973-541-8060

2. COMPOSITION/INFORMATION ON INGREDIENTS**Information on ingredients / Hazardous components**

tributyl phosphate			
CAS-No.	126-73-8	Percent (Wt./ Wt.)	1.0 - 5.0 %
ethanediol; ethylene glycol			
CAS-No.	107-21-1	Percent (Wt./ Wt.)	10 - 30 %
Diethylene glycol			
CAS-No.	111-46-6	Percent (Wt./ Wt.)	5.0 - 10 %
Talc, Magnesium silicate hydrate			
CAS-No.	14807-96-6	Percent (Wt./ Wt.)	10 - 30 %
NJTSR No.56705700001-5024P			
CAS-No.	Trade Secret	Percent (Wt./ Wt.)	1.0 - 5.0 %
Barium sulfate			
CAS-No.	7727-43-7	Percent (Wt./ Wt.)	1.0 - 5.0 %
NJTSR No.56705700001-5747P			
CAS-No.	Trade Secret	Percent (Wt./ Wt.)	1.0 - 5.0 %

Other information

MATERIAL SAFETY DATA SHEET

888-2504 COLORTREND®PERMA CAL YELLOW

AX

degussa.

Material no.

Specification

139280

Order Number

Version

Revision date

Print Date

Page

1.10 / US

08/17/2005

8/19/2005

2 / 12

This material is classified as hazardous under OSHA regulations.

3. HAZARDS IDENTIFICATION

*** EMERGENCY OVERVIEW ***

Form-paste **Color-yellow** **Odor-Glycol odor.**

COLORTREND colorants may cause eye, skin and respiratory tract irritation.
May be harmful if swallowed.

POTENTIAL HEALTH EFFECTS

Eye contact

According to test results on COLORTREND base mixtures, this product is classified as a moderate eye irritant. May cause tearing, reddening and/or swelling.

Skin Contact

COLORTREND colorants may cause irritation.

Inhalation

COLORTREND colorants may cause irritation.

Ingestion

Moderately toxic. May be harmful if swallowed.

Ingestion of ethylene glycol may cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, irritability and central nervous system effects. Swallowing large volumes of ethylene glycol causes severe kidney damage and cardiopulmonary effects (metabolic acidosis) which may be fatal. The human oral lethal dose is approximately 1.6 g/kg.

Ingestion of excessive amounts of diethylene glycol causes abdominal discomfort or pain, nausea, vomiting, dizziness, central nervous system effects, kidney damage and cardiopulmonary effects (metabolic acidosis) which may be fatal (estimated human oral lethal dose, 1.0 to 1.2 g/kg) and may cause liver effects.

Ingestion of ethylene glycol can cause neurological impairment.

Repeated ingestion of ethylene glycol can cause bone marrow, liver, and sperm effects.

Chronic Health Hazard

Ethylene glycol may aggravate an existing kidney disease. Repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material. Repeated inhalation of ethylene glycol mist may produce signs of central nervous system involvement, particularly dizziness and drowsiness.

Short term exposures to talc may cause lung irritation. Long term excessive exposure to talc dust may cause talcosis, a pulmonary fibrosis which in turn may lead to severe and permanent damage to the lungs. NTP Toxicology and Carcinogenesis Studies of Talc revealed that there is some evidence of carcinogenic activity in male rats and clear evidence of carcinogenic activity in female rats. There was no evidence of carcinogenic activity in male or female mice.

In long term dietary studies of tributyl phosphate in rats, urinary bladder tumors, urinary bladder

MATERIAL SAFETY DATA SHEET

888-2504 COLORTREND®PERMA CAL YELLOW

AX

degussa.

Material no.		Version	1.10 / US
Specification	139280	Revision date	08/17/2005
Order Number		Print Date	8/19/2005
		Page	3 / 12

hyperplasia and increased liverweight were noted. Benign liver tumors, liver enlargement and urinary bladder hyperplasia were observed in long term studies in mice. Inhalation of high dust levels of barium sulfate may cause baritosis, an irritation of the lung tissue which is not incapacitating and usually is reversible.

Because this product is a free-flowing liquid or paste, dust inhalation is not an expected route of exposure.

4. FIRST AID MEASURES

Inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.

Skin contact

Remove contaminated clothing/shoes. Flush skin with water. Follow by washing with soap and water. If symptoms develop or persist, obtain medical attention. Wash clothing before reuse.

Eye contact

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes or until all material has been removed. Obtain medical attention.

Ingestion

If swallowed give two glasses of water and induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

Flash point not determined

Lower explosion limit not determined

Upper explosion limit not determined

Suitable extinguishing media

In case of fire, use water (flood with water), dry chemical, CO2 or "alcohol" foam.

Specific hazards during fire fighting

Contains material that can burn in fire if contained water is evaporated by heat or fire. Burning will produce hazardous compounds including oxides of: carbon, nitrogen, sulfur.

Further information

As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear personal protective equipment; see section 8.

MATERIAL SAFETY DATA SHEET

888-2504 COLORTREND®PERMA CAL YELLOW

AX

degussa.

Material no.

Specification

139280

Order Number

Version

Revision date

Print Date

Page

1.10 / US

08/17/2005

8/19/2005

4 / 12

Environmental precautions

Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

Methods for cleaning up

Ventilate area. Absorb spill with inert material and place in a chemical waste container.

7. HANDLING AND STORAGE

Handling

Safe handling advice

Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Avoid breathing vapor or mist. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Wash thoroughly after handling.

Storage

Requirements for storage areas and containers

Keep in a dry, cool place.

Keep container closed when not in use.

Residual vapors might explode on ignition; do not apply heat, cut, drill, grind or weld on or near this container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls

• isopropanol

CAS-No. 67-63-0

Control parameters 400 ppm
980 mg/m3
200 ppm
400 ppm

PEL:(OSHA Z1)

Time Weighted Average (TWA):(ACGIH)

Short Term Exposure Limit

(STEL):(ACGIH)

Time Weighted Average (TWA)

Permissible Exposure Limit (PEL):(US CA
OEL)

Short Term Exposure Limit (STEL):(US CA
OEL)

400 ppm
980 mg/m3

500 ppm
1225 mg/m3

• tributyl phosphate

CAS-No. 126-73-8

0.2 ppm
5 mg/m3
0.2 ppm
2.5 mg/m3

Time Weighted Average (TWA):(ACGIH)

PEL:(OSHA Z1)

Time Weighted Average (TWA)

Permissible Exposure Limit (PEL):(US CA
OEL)

• ethanediol; ethylene glycol

CAS-No. 107-21-1

100 mg/m3

Ceiling Limit Value:(ACGIH)

MATERIAL SAFETY DATA SHEET**888-2504 COLORTREND®PERMA CAL YELLOW****AX**

degussa.

Material no.

Specification

139280

Order Number

Version

Revision date

Print Date

Page

1.10 / US**08/17/2005****8/19/2005****5 / 12**

Aerosol.

40 ppm

100 mg/m3

Vapor.

Ceiling Limit Value:(US CA OEL)

• Talc, Magnesium silicate hydrate

CAS-No.

14807-96-6

2 mg/m3

Respirable fraction.

The value is for particulate matter containing no asbestos and <1% crystalline silica.

Time Weighted Average (TWA):(ACGIH)

5 mg/m3

Respirable fraction.

PEL:(OSHA Z1)

15 mg/m3

Total dust.

PEL:(OSHA Z1)

2 mg/m3

Respirable dust.

Time Weighted Average (TWA)

Permissible Exposure Limit (PEL):(US CA OEL)

20millions of particles
per cubic foot of air

Time Weighted Average (TWA):(Z3)

2.4millions of particles
per cubic foot of air

Time Weighted Average (TWA):(Z3)

Respirable.

The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.

0.1 mg/m3

Respirable.

Time Weighted Average (TWA):(Z3)

The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.

0.3 mg/m3

Total dust.

Time Weighted Average (TWA):(Z3)

The value is calculated from a specified equation using a value of 100%. Lower values of % will give higher exposure limits. See regulation for specific equation.

• Barium sulfate

CAS-No.

7727-43-7

10 mg/m3

5 mg/m3

Respirable fraction.

Time Weighted Average (TWA):(ACGIH)

PEL:(OSHA Z1)

15 mg/m3

Total dust.

PEL:(OSHA Z1)

5 mg/m3

Time Weighted Average (TWA)

Permissible Exposure Limit (PEL):(US CA

MATERIAL SAFETY DATA SHEET**888-2504 COLORTREND®PERMA CAL YELLOW****AX**

degussa.

Material no.

Specification

139280

Order Number

Version

Revision date

Print Date

Page

1.10 / US**08/17/2005****8/19/2005****6 / 12**

OEL)

Respirable fraction.

10 mg/m3

Time Weighted Average (TWA)

Permissible Exposure Limit (PEL):(US CA

OEL)

Total dust.

Other information

The exposure value for ethylene glycol is given as an aerosol.

The AIHA WEEL for diethylene glycol is 50 PPM for total vapor and aerosol and 10 mg/m3 for aerosol alone (eight hour time-weighted averages).

The OSHA TWA and ACGIH TWA exposure values for talc are for asbestos free talc expressed as millions of particles per cubic foot (mppcf).

Engineering measures

Use only in well-ventilated areas.

Personal protective equipment**Respiratory protection**

A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Hand protection

Use impermeable gloves.

Eye protection

Chemical resistant goggles must be worn.

Skin and body protection

A safety shower and eye wash fountain should be readily available.

To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form	paste
Color	yellow
Odor	Glycol odor.

Safety data

pH	8.0 - 9.0
Boiling point/range	> 100 °C
Flash point	not determined

MATERIAL SAFETY DATA SHEET**888-2504 COLORTREND®PERMA CAL YELLOW****AX**

degussa.

Material no.

Specification

139280

Order Number

Version

Revision date

Print Date

Page

1.10 / US**08/17/2005****8/19/2005****7 / 12**

Lower explosion limit	not determined
Upper explosion limit	not determined
Relative density	1.3
Solubility/qualitative	Solubility in water: Dispersible.
Viscosity, dynamic	70 - 85 KU (25 °C)
Relative vapor density	Heavier than air
Solvents and Volatiles Data	
	% VOC (gm/l) 45.16
Evaporation rate	Slower than butyl acetate

10. STABILITY AND REACTIVITY

Conditions to avoid	Not applicable.
Materials to avoid	strong acids, oxidizing substances
Further information	Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Component Acute oral toxicity	tributyl phosphate 126-73-8 LD50 Rat: 1200 mg/kg
	ethanediol; ethylene glycol 107-21-1 LD50 Rat(female): 4000 mg/kg
	Diethylene glycol 111-46-6 LD50 Rat: 20760 mg/kg
	NJTSR No.56705700001-5024P Trade Secret LD50 Rat: 1900 mg/kg
	NJTSR No.56705700001-5747P Trade Secret LD50 Rat: > 2000 mg/kg
Component Acute inhalation	tributyl phosphate

MATERIAL SAFETY DATA SHEET**888-2504 COLORTREND®PERMA CAL YELLOW****AX**

degussa.

Material no.

Specification

139280

Order Number

Version

Revision date

Print Date

Page

1.10 / US**08/17/2005****8/19/2005****8 / 12**

toxicity

126-73-8

LC50 Rat: > 20 mg/l / 1 h

Component Acute dermal toxicity

tributyl phosphate

126-73-8

LD50 Rabbit: > 10000 mg/kg

ethanediol; ethylene glycol

107-21-1

LD50 Rabbit: 10500 mg/kg

Diethylene glycol

111-46-6

LD50 Rabbit: 13300 mg/kg

NJTSR No.56705700001-5024P

Trade Secret

LD50 Rabbit: 1110 mg/kg

data sheet of the supplier

Component Repeated dose
toxicity

ethanediol; ethylene glycol

107-21-1

Chronic ingestion of an ingredient in this product has been shown to cause adverse effects on the peripheral nervous system of laboratory animals.

Talc, Magnesium silicate hydrate

14807-96-6

Inhalation Rat(male)

Testing period: 791 d

LOAEL: 0.006 mg/l

target organ/effect: Lungs

Component carcinogenicity
assessment

Talc, Magnesium silicate hydrate

14807-96-6

Short term exposures to talc may cause lung irritation. Long term excessive exposure to talc dust may cause talcosis, a pulmonary fibrosis which in turn may lead to severe and permanent damage to the lungs. NTP Toxicology and Carcinogenesis Studies of Talc revealed that there is some evidence of carcinogenic activity in male rats and clear evidence of carcinogenic activity in female rats. There was no evidence of carcinogenic activity in male or female mice.

Component teratogenicity
assessment

ethanediol; ethylene glycol

107-21-1

Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. However, there is currently no available information to suggest that ethylene glycol has caused birth defects in humans.

Component General Toxicity
Information

tributyl phosphate

126-73-8

In long term dietary studies of the alkyl phosphate in rats, urinary bladder

MATERIAL SAFETY DATA SHEET**888-2504 COLORTREND®PERMA CAL YELLOW****AX**

degussa.

Material no.

Specification

139280

Order Number

Version

Revision date

Print Date

Page

1.10 / US**08/17/2005****8/19/2005****9 / 12**

tumors, urinary bladder hyperplasia and increased liver weight were noted. Benign liver tumors, liver enlargement and urinary bladder hyperplasia were observed in long term studies in mice.

ethanediol; ethylene glycol
107-21-1

Ethylene glycol may aggravate an existing kidney disease. Repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material. Repeated inhalation of ethylene glycol mist may produce signs of central nervous system involvement, particularly dizziness and drowsiness.

Diethylene glycol
111-46-6

According to long-term animal inhalation studies, very high concentrations of diethylene glycol vapors caused central nervous system effects in mice and rats. However, an extensive review of the literature shows that no such effects have been documented in humans (Patty's Industrial Hygiene and Toxicology, 1982, Third Revised Ed., Vol 2c, p 3838). In a continuous breeding study of mice, continued ingestion of large amounts of diethylene glycol (6 g/kg/day) caused an adverse effect on fertility and some embryotoxic and fetotoxic effects concurrent with some maternal toxicity. The relevance of these very high doses to humans is uncertain.

NJTSR No.56705700001-5024P

Trade Secret

An ingredient in this product has been shown to cause developmental toxicity in laboratory animals in the presence of maternal toxicity.

Barium sulfate
7727-43-7

Inhalation of high dust levels of barium sulfate may cause baritosis, an irritation of the lung tissue which is not incapacitating and usually is reversible.

12. ECOLOGICAL INFORMATION

General Ecological Information

No ecotoxicological studies are available.

13. DISPOSAL CONSIDERATIONS**WASTE**

Advice on disposal

Waste must be disposed of in accordance with federal, state, provincial and local regulations. CONTAINER DISPOSAL: Empty containers by removing the top and inverting to allow all free flowing product to drain. To meet regulatory criteria, the container is considered empty when less than

MATERIAL SAFETY DATA SHEET**888-2504 COLORTREND®PERMA CAL YELLOW****AX**

degussa.

Material no.

Specification

139280

Order Number

Version

Revision date

Print Date

Page

1.10 / US**08/17/2005****8/19/2005****10 / 12**

3% remains in the container. Additional special handling is not typically required and the empty container can be discarded with other non-hazardous trash. Note: Local disposal regulations may be more stringent and require additional restrictions or precautions. Customers should check with their local disposal company, municipal or state authority. Recycle of plastic or metal containers may require clean rather than empty containers. In this case the containers can be rinsed with water until the containers are considered generally product free.

14. TRANSPORT INFORMATION**Transport/further information**

Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION**Information on ingredients / Non-hazardous components**

This product contains the following non-hazardous components

Water

CAS-No.	7732-18-5	Percent (Wt./ Wt.)	10 - 30 %
---------	-----------	--------------------	-----------

NJTSR No.56705700001-5578P

CAS-No.	Trade Secret	Percent (Wt./ Wt.)	10 - 30 %
---------	--------------	--------------------	-----------

NJTSR No. 31765300002-5572P

CAS-No.		Percent (Wt./ Wt.)	1.0 - 5.0 %
---------	--	--------------------	-------------

NJTSR No.56705700001-5653P

CAS-No.	Trade Secret	Percent (Wt./ Wt.)	5.0 - 10 %
---------	--------------	--------------------	------------

US Federal Regulations**OSHA**

If listed below, chemical specific standards apply to the product or components:

- None listed

Clean Air Act Section (112)

If listed below, components present at or above the de minimus level are hazardous air pollutants:

- ethanediol; ethylene glycol
CAS-No. 107-21-1

CERCLA Reportable Quantities

If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:

- ethanediol; ethylene glycol
CAS-No. 107-21-1

MATERIAL SAFETY DATA SHEET**888-2504 COLORTREND®PERMA CAL YELLOW****AX**

degussa.

Material no.

Version

1.10 / US

Specification

139280

Revision date

08/17/2005

Order Number

Print Date

8/19/2005

Page

11 / 12

Reportable Quantity 18169 lbs

SARA Title III Section 311/312 Hazard Categories

The product meets the criteria only for the listed hazard classes:

- Acute Health Hazard
- Chronic Health Hazard

SARA Title III Section 313 Reportable Substances

If listed below, components are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

- ethanediol; ethylene glycol
CAS-No. 107-21-1

Toxic Substances Control Act (TSCA)

If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

- None listed

State Regulations**California Proposition 65**

A warning under the California Drinking Water Act is required only if listed below:

- None listed

International Chemical Inventory Status

Unless otherwise noted, this product is in compliance with the inventory listing of the countries shown below. For information on listing for countries not shown, contact Degussa Corporation Product Regulatory Department:

- | | |
|--------------------------|---------------------------|
| • Europe (EINECS/ELINCS) | Not listed/Not registered |
| • USA (TSCA) | Listed/registered |
| • Australia (AICS) | Not listed/Not registered |
| • Japan (MITI) | Not listed/Not registered |
| • Korea (TCCL) | Not listed/Not registered |
| • Philippines (PICCS) | Not listed/Not registered |
| • China | Not listed/Not registered |

16. OTHER INFORMATION**HMIS Ratings**

MATERIAL SAFETY DATA SHEET

888-2504 COLORTREND®PERMA CAL YELLOW

AX

degussa.

Material no.		Version	1.10 / US
Specification	139280	Revision date	08/17/2005
Order Number		Print Date	8/19/2005
		Page	12 / 12

Health :	2
Flammability :	1
Physical Hazard :	0

Further information

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.